AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0002] with the following amended paragraph:

The present invention relates to ~~anaccceleration~~ an acceleration sensor, and more specifically, to a capacitive acceleration sensor (CAS) with a low production cost for meeting market requirements.

Please replace paragraph [0004] with the following amended paragraph:

An acceleration sensor is widely applied in seismology, automobile safety air bag, robotics, and so on. Currently, ~~anaccceleration~~ an acceleration sensor in common use includes a ~~piezoresistiveaccceleration~~ piezoresistive acceleration sensor, a ~~piezoelectricaccceleration~~ piezoelectric acceleration sensor, a capacitive acceleration sensor, and a semiconductor acceleration sensor.

Please replace paragraph [0005] with the following amended paragraph:

Additionally, because sizes of the acceleration sensors are reduced gradually, a ~~micromachiningtechnology~~ micromachining technology is developed to manufacture various microsensors and microactuators that are integrated with micro electronic circuits to form a microsystem, which is generally called a micro electro-mechanical system (MEMS). The MEMS has an extremely small size and can be manufactured by utilizing batch production for reducing a production cost. In addition, the MEMS and a signal processing circuit can be simultaneously formed on a silicon wafer for forming a monolithic device, which can reduce a distance between an acceleration sensor and the signal processing circuit and that is quite important for the acceleration sensor. As the acceleration sensor outputs a signal, the signal is firstly amplified by the signal processing circuit for preventing the signal from being

disturbed by an ambient electromagnetic field, and the signal can be analog-to-digital (A/D) converted by the signal processing circuit and be transmitted to a central processing unit. Therefore, as the distance between the acceleration sensor and the signal processing circuit is reduced, signal reliability can be greatly improved, and interconnecting lines and loads of central control systems can be effectively decreased. As a result, the acceleration sensor that is manufactured by use of MEMS is developed rapidly due to its advantages of good detection sensitivity and a low production cost. Additionally, among the above-mentioned kinds of acceleration sensors, the capacitive acceleration sensor has advantages of high detection sensitivity and low sensitivity to an ambient environment so that the capacitive acceleration sensor has become more and more popular in a market.

Please replace paragraph [0007] with the following amended paragraph:

When a vertical acceleration force is applied on the capacitive acceleration sensor 10, a flexural vibration occurs in the movable section of the beam structure 14, thereby altering a capacitance of the plate capacitor 22. Thereafter, the ~~control circuit 22~~ control circuit 24 receives a signal output from the plate capacitor 22 and performs a signal process, such as signal amplification or temperature compensation, on the signal. Then, the ~~control circuit 22~~ control circuit 24 converts the signal output from the plate capacitor 22 into a differential signal that is eventually output from the ~~control circuit 22~~ control circuit 24. Since the differential signal corresponds to the applied acceleration force, the capacitive acceleration sensor 10 can utilize the CMOS control circuit 24 to detect variations of an electrostatic capacitance of the plate capacitor 22 for obtaining the applied acceleration force. Moreover, the capacitance of the plate capacitor 22 is only relative to physical parameters, so that the capacitive acceleration sensor 10 can be formed with a material having a

low thermal expansion coefficient for improving its detection sensitivity.

After paragraph [0014], add the new paragraph listed below:

[0014.1] Fig.3 is a schematic diagram of a capacitive acceleration sensor according to another embodiment of the present invention.

Please replace paragraph [0017] with the following amended paragraph:

In the preferred embodiment of the present invention, the non-single-crystal-silicon-based substrate 32 is composed of glass. Because the glass substrate 32 has a low melting point, the TFT control circuit 46 has to be a low temperature polysilicon (LTPS) TFT control circuit, which can be formed at a low temperature, thereby preventing the glass substrate 32 from being damaged due to a high temperature. Additionally, the non-single-crystal-silicon-based substrate 32 can be a quartz substrate in another embodiment of the present invention. Owing to a high melting point of the quartz substrate 32, the TFT control circuit [[42]] 46 can be a high temperature polysilicon TFT control circuit [[42]]. In addition, the polysilicon beam structure 36 and the polysilicon supporter 38 can be formed simultaneously or can be formed separately. The movable electrode 40 can be composed of doped polysilicon or other metals, and the stationary electrode 42 can be composed of aluminum (Al), titanium (Ti), platinum (Pt), or alloys.

Please replace paragraph [0018] with the following amended paragraph:

It should be noticed that although the control circuit 46 is formed on the glass substrate 32 in the preferred embodiment of the present invention, the present invention is not confined to that. Please refer to Fig.3. Fig.3 is a schematic diagram of a capacitive acceleration sensor

30 according to another embodiment of the present invention. As shown in Fig.3, [[The]] the control circuit 46 ~~also can be formed on a printed circuit board (PCB) (not shown) and be~~ is electrically connected to the plate capacitor 44 via a flexible printed circuit (FPC) board 50 ~~(not shown)~~. ~~Alternatively, the control circuit 46, maybe including a plurality of integrated circuit (IC) chips, can be directly formed on a FPC board, and the control circuit 46 is electrically connected to the plate capacitor 44 via the FPC board~~. Furthermore, a surface of the non-single-crystal-silicon-based substrate 32 further comprises a TFT display area 52 for displaying an acceleration force detected by the capacitive acceleration sensor 30, thereby making it convenient for users to measure an acceleration force and to observe measuring results.